Decreasing Length of Stay in Oncology Inpatient Unit for Patients Receiving Long Treatment Chemotherapy

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Background

Prolonged hospital length of stay (LOS) is associated with an increased risk of hospital-acquired conditions (HACs), such as thromboembolic disease and intravascular infections (Clarke A, 1998). In addition, prolonged LOS is associated with higher direct costs of care (Clarke A, 1998).

Delays in chemotherapy initiation following elective admission can lead to longer LOS, increasing costs, consuming hospital resources, and decreasing patient satisfaction.

No prior research has evaluated delays in chemotherapy initiation within an inpatient setting for patients receiving long protocol chemotherapy.

Cancer patients typically receive chemotherapy in an outpatient setting. However, certain circumstances, such as continuous multi-day infusions of vesicants, may require administration in an inpatient setting.

Etoposide, Vinristine, Doxorubicin, Cyclophosphamide, and Prednisone (EPOCH) chemotherapy is a regimen frequently used to treat non-Hodgkin’s lymphoma and other hematologic malignancies. In this regimen, Etoposide, Vinristine, and Doxorubicin are continuously infused through a central venous catheter over 48 hours. Cyclophosphamide being administered on day four or five (Wilder DD).

In the JHAH Inpatient Oncology Unit, it was observed that there were usually some delays in initiating chemotherapy treatment for patients receiving long protocol chemotherapy for cancer. This was attributed to a number of factors:

1. Patients on the Elective Admission list often presented late afternoon to the Unit.
2. These patients would then require baseline blood tests done before receiving chemotherapy.
3. The patient’s Primary Consultant would not be able to see the patient immediately as they would be occupied in the outpatient clinic.
4. In some instances, due to the demands of work in an Oncology setting, the charge nurse would not be able to release chemotherapy orders for verification by the pharmacy in a timely manner.

Methodology

Data from the EPIC database was used prospectively, and the sample was 96 patients admitted to the JHAH Inpatient Oncology Unit from March to August 2021.

Patients aged 18 years and above, with a diagnosis of lymphoma, leukemia, colorectal cancer, lung cancer and Ewing sarcoma, who received concurrent chemotherapy treatment for at least four days with Etoposide, or 5FU for two consecutive days, were analyzed. Patients receiving all other regimens were also excluded. Only patients on the Elective Admission list, who had had blood tests one or two days before admission were included.

The hospital day was recorded for each inpatient cycle using the EPIC database, which identifies the hospital day on which a particular procedure or service occurred. The LOS from admission to chemotherapy initiation was categorized as the same day (hospital day 1), two days, or more than two days.

Patients were considered to have a delay in chemotherapy initiation if the time from admission to treatment initiation of any chemotherapy drugs was more than one day.

Length of stay was obtained from EPIC. The expected LOS for patients receiving EPOCH chemotherapy for lymphoma and Ewing’s sarcoma is five days. LOS was categorized as ≤5 days or >5 days. Patients were considered to have a prolonged LOS if the LOS was greater than five days.

Conclusions

The implementation of Blood Lab tests one or two days before patient admission and effective communication between health care providers can significantly reduce length of stay for Oncology patients. Focusing on decreasing length of stay is imperative, as this can greatly reduce the risk of infection, eliminate unnecessary hospital stays, and decrease health care costs. Though more research needs to be done to further examine interventions, this project has demonstrated how a nurse-led standardization of practice can have a positive impact on patient outcomes.

References


Bibliography

Length Of Stay

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